

MANUFACTURE OF JAMS, JELLIES, MARMALADES AND PRESERVES

Selected References and Patents
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Cruess, W. V., and L. Singh.

1922. Marmalade juice and jelly juice from citrus fruits. Calif. Agr. Exp. Sta. Circ. 243.

Chace, E. M.

1922. By-products from citrus fruits. U. S. Dept. Agr., Dept. Circ. 232, revised 1925. (Out of print, new edition to be published).

Paine, H. S.

1922. Use of pectin in jams and jellies. Amer. Food Jour., vol. 17, no. 3, pages 11-13. March.

Singh, L.

1922. Factors in manufacturing fruit products. Canning Age, vol. 3, no. 6, pages 17-20; Important discoveries in jelly making. No. 7, pages 5-8; Practical experiments in jelly making. No. 8, pages 11-14.

Singh, L.

1922. A study of the relation of pectin and acidity in jelly making. Jour. Ind. Eng. Chem., 14: 710-711.

Waksman, S. A.

1922. Use of enzymes in the clarification of jellies and fruit juices. Canner, vol. 54, no. 18, pages 45-46. April 29.

Tarr, L. W.

1922. A study of the factors affecting the jellying of fruits. Ann. Rept. Delaware Agr. Exp. Sta. Bul. 133, pages 14-15.

Brown, J. C.

1923. Some observations on pectin. Amer. Vinegar Ind., vol. 2, no. 10, pages 14-15, 22. June.

Anon.

1923. Starch syrup or glucose in the fruit juice and marmalade industry.

Amer. Vinegar Ind., vol. 2, no. 11, pages 20-21. July.

Anon.

1923. Marmalade - efficient method of manufacture. Amer. Vinegar Ind., vol. 2, no. 12, pages 9-11. August.

Anon.

1923. Handling fruit products and preserves in glass-lined equipment. Fruit Prod. Jour., vol. 3, no. 3, pages 12-13. November.

Cohen, J. S.

1923. Pectin, jams, and jellies. Fruit Prod. Jour., vol. 3, no.4, pages 13-15. December.

Tarr, L. W.

1923. Fruit jellies. I. The role of acids. Delaware Agr. Exp. Sta. Bul. 134 (Tech. Bul. 2); II. The role of sugar. Bul. 136 (Tech. Bul. 3).

Cruess, W. V.

1923. Relation of jelly manufacture to canning. Canner, vol. 57, no.3, pages 27-30. July 14.

Chernoff, L. H.

1923. Pectin, jelly making, and sugar. Amer. Food Jour., 8: 200-201.

Ripperton, J. C.

1923. Application of the principles of jelly making to Hawaiian fruits (guava). Hawaii Agr. Exp. Sta. Bul. 47.

Irish, J. H.

1923. Pear by-products. Calif. Agr. Exp. Sta. Circ. 259.

Johnstin, R., and M. C. Denton.

1923. The relation of alcohol precipitate to jellying power of citrus pectin extracts. Ind. Eng. Chem., 15: 778-780.

Campbell, C. H.

1923. Scientific and practical manufacture of apple pomace jelly. Canner, vol. 57, no. 20, pages 23-25. November 10.

Sucharipa, R.

1923. Experimental data on pectin-sugar-acid gels. Jour. Assoc. Official Agr. Chem., 7: 57-68.

Brooks, R. O.

1924. The chemistry of fruits and fruit products. Fruit jellies. Fruit Prod. Jour., vol 3, no. 6, pages 5-7, February; Fruit jams, marmalades, preserves, etc. Vol. 3, no. 7, pages 5-7. March.

Kroha, G. F.

1924. Some recent advances in glass lined equipment for vacuum processing. Fruit Prod. Jour., vol. 3, no. 8, pages 14-16. April.

Brooks, R. O.

1924. Pectin fruit jellies. Fruit Prod. Jour., vol 3, no. 9, pages 5-7. May.

Bell, J. C.
1924. "Mother's apple butter". Fruit Prod. Jour., vol. 3, no. 10,
pages 17-18. June.

Anon.
1924. Orange marmalade (English, with formula). Fruit Prod. Jour.,
vol. 4, no. 3, page 16. November.

Wendelmuth, G.
1924. The jellifying capacity of fruit juices and pectin solutions.
Fruit Prod. Jour., vol. 4, no. 4, pages 7-8. December.

Halliday, E. G., and G. R. Bailey. 1924. Effect of CaCl₂ on acid-sugar-pectin gels. Ind. Eng. Chem., 16: 595-597.

Cruess, W. V.
1924. Commercial fruit and vegetable products. 1st Ed., Chap. 17 and 18,
pages 263-300. McGraw-Hill Book Co., Inc., New York, N. Y.
(2nd Ed. 1938)

Tarr, L. W.
1924. Fundamentals of fruit jelly formation. Canning Age, 5: 759-760, 763.

Boland, E. M.
1925. California's new fig canning industry. Canning Age, 6: 772-774, 792.

Lathrop, C. P.
1925. Composition of pure fruit preserves and jams. Canning Age,
6; 625-628; Pure fruit jellies, 694-697, 715;
The quality preserver and his raw products, 835-837; The
manufacture of quality preserves, 971-974.

Jameson, E.

1925. Requirements of pectin for the commercial jelly-maker. Ind. Eng.
Chem., 17; 1291-1292.

Leo, H. T.

1925. The proper application of pectin in jelly making. Canner, vol.

61, no. 2, page 41. July 4.

Brooks, R. O.
1925. Pectin content of certain fruit products. Fruit Prod. Jour., vol.
4, no. 7, pages 5, 6. March.

Brooks, R. O.
1925. Sugars in jellies and jams. Fruit Prod. Jour., vol. 4, no. 8, pages 7, 8. April.

Lodian, L.

1925. Cosmopolitan New York consumes various fruit products. Interesting fruit preserves from all parts of the globe. Fruit Prod.

Jour., vol. 4, no. 8, pages 11-13. April.

Lathrop, C. P., and W. L. Walde.

1925. Water soluble solids content of fruit preserves and jams. Fruit Prod. Jour., vol. 5, no. 1, pages 5-6, September.

Lathrop, C. P.

1926. Cold packing for the preserver. Canning Age, 7; 907-909; 988-990.

Bitting, A. W.

1926. Surface spoilage of preserves. Canning Age, 7: 926.

Cruess, W. V.

1926. The utilization of surplus plums. Calif. Agr. Exp. Sta. Bul. 400.

Hartig, H. H.

1926. The selection of fruits for jellies, preserves and jams. Fruit Prod. Jour., vol. 5, no. 6, pages 14-16. February.

Tarr, L. W.

1926. Fruit jellies. III. Jelly measurements. Delaware Agr. Exp. Sta. Bul. 142 (Tech. Bul. 5).

Myers, P. B., and G. L. Bater.

1926. Fruit jellies. IV. The role of salts. Delaware Agr. Exp. Sta. Bul. 144 (Tech. Bul. 7).

Rooker, W. A.

1926. The evaluation of pectin raw material. Fruit Prod. Jour., vol. 5, no. 5, pages 22-25. January.

Lenhard, G. A.

1926. Make apple butter as good as you can. Fruit Prod. Jour., vol. 5, no. 7, pages 5-6. March.

Bell, J. C.

1926. Clarification of pectinous fruit juices. Fruit Prod. Jour., vol. 5, no. 9, pages 15-16, May; Extraction of pectinous fruit juices, no. 11, pages 15-16, July; Making jelly from pectinous fruit juices, no. 12, pages 10-11, August.

Irish, J. H.

1926. Utilization of pomegranates. Fruit Prod. Jour., vol. 6, no. 1, pages 11-14. September.

McCulloch, L.

1927. Curing and preserving citron. U. S. Dept. Agr., Circ. 13.

Condit, I. J., and W. V. Cruess.

1927. I. The Kadota fig, pages 3-42. II. Kadota fig products, pages 43-45. Calif. Agr. Exp. Sta. Bul. 436.

Rooker, W. A.

1927. The commercial manufacture of jams, jellies, and kindred products, and a resume of various government standards for preserves.

Fruit Prod. Jour., vol. 7, no. 4, pages 9-11. December.

- Carlsson, V.
 - Jellies and jams made with and without an extracted pectin. 1927. Teachers' Col. Record, vol. 28, no. 8, 11 pages (reprint). Columbia University, New York, N. Y.
- Cruess, W. V. The manufacture of jelly and marmalade. Canner, vol. 64, no. 16, page 38, April 9; no.17, page 34, April 16; no.20, page 37, May 7; no. 22, page 35, May 21; no. 24, page 40, June 4; no. 26, page 34, June 18; vol. 65, no. 3, page 36, July 2.
- Lathrop, C. P., and W. L. Walde. Effect of fruit acids on fruit flavors in jellies and jams. . 1927. Fruit. Prod. Jour., vol. 6, no. 5, pages 11-12, 27. January.
- Canning, preserving and jelly making. 2nd Ed., 197 pages. Little, Hill. J. M. 1927. Browne & Co., Boston, Mass.
- Lindeman, J. Contribution to the colloid chemistry of fruit juices. A study 1927. on the conditions for the making of jelly from apple juice. Meldinger Norges Landbruks, 7: 157-297. Reviewed, - Chem. Abst. 22: 2012, 1928.
- Rhoads, E. L. 1927. Instruments available for factory control in the manufacture of jellies and preserves. Fruit Prod. Jour., vol. 6, no. 7, pages 8-9. March.
- Andrews, G. 1927. Preserves look toward better quality. Fruit Prod. Jour., vol. 6, no. 6, pages 15-16. February.
- Schmidt, N. C. Automatic jam kettle temperature control maintains quality of product. Fruit Prod. Jour., vol. 6, no. 8, pages 8-9. April.
- 1927. Jam manufacture. Food Manufacture, 1: 12-14; 89-92. May, August. Mansfield, H.
- Production problems and successes in packing liquid and semi-liquid Finch. E. E. products. Canner, vol. 65, no. 13, pages 29-30, September 17; no. 15, pages 31-34, October 1; no. 17, pages 29-30, October 15; no. 20, pages 29-30, 32, November 5.
- Cruess, W. V. 1927. Canning and preserving Kadota figs. Canner, vol. 65, no. 20, pages 15-16. November 5.
- Lathrop, C. P., and W. L. Walde. The Japanese quince, remarkable for its very high 1-malic acid content and other qualities valuable to the preserving and allied interests. Fruit Prod. Jour., vol. 7, no. 4, pages 14-18. December.

Myers, P. B., and G. L. Baker.

1927. Fruit jellies. V. The role of pectin. 1. The viscosity and jellifying properties of pectin solutions. Delaware Agr. Exp. Sta. Bul. 149 (Tech. Bul. 8).

Seligman, G.

1927. Modern methods in the fruit-preserving industry. Food Manufacture, 2: 203-205.

Lathrop, C. P.

1928. Chemistry and the preserve, or jam and jelly industry. Ind. Eng. Chem., 20: 1298-1301.

Rooker, W. A.

1928. Commercial manufacture of jams, jellies, and kindred products -Pectin and pectic substances -- The chemistry of jelly making.
Fruit Prod. Jour., vol. 7, no. 6, pages 18-20. February.

Fellers, C. R., and F. P. Griffiths.

1928. Jelly strength measurements of fruit jellies by Bloom gelometer.
Ind. Eng. Chem., 20: 857-859.

Anon.

1928. Preserved figs - the new industry of Texas. Canning Age, 9: 625-627

Hirst, F.

1928. The effect of sugar, acid, and "set" on the keeping properties of jams. Food Manufacture, 3: 447-450.

Fellers, C. R.

1928. Apple butter will prove a big profit maker to the small cider mill owner. Fruit Prod. Jour., vol. 8, no. 2, pages 12-14.
October.

Taylor, W. A.

1928. Control of acidity and alkalinity in canning and allied industries.
Glass Container, vol. 7, no. 4, pages 16-19, 36, 38, 40. February.

Turnbow, G. D., and W. V. Cruess.

1928. Investigations of the use of fruits in ice creams and ices. Fruit Prod. Jour., vol. 7, no. 8, pages 9-11. April.

(A. C. Neilsen Co., and J. W. Allen & Co.)

1928. An unbiased report on the performance of Pfaudler equipment in the manufacture of jams. Fruit Prod. Jour., vol. 7, no. 10, pages 9-11, 12. June.

Joslyn, M. A.

1928. The role of viscosity in heat penetration. Heat penetration in sugar solutions. Fruit Prod. Jour., vol. 7, no. 9, pages 16-19, May; no. 10, pages 22-24, June; no.11, pages 13-15, 18, July.

- Fellers, C. R.
 - 1928. More products and by-products from the cider mill (apple jelly).
 Fruit Prod. Jour., vol. 8, no. 1, pages 10-13. September.
- James, L. H.
 1928. The bacterial content of raw and commercial sugars. Food
 Industries, 1: 65-69.
- Hamer, J. B., H. Coffing, and T. B. Curry.

 1928. My experience with apple products. Fruit Prod. Jour., vol. 8,

 no. 3, pages 5-6, 21. November.
- Anon.
 1928. Simplification of glass containers for preserves, jelly and apple butter. Fruit Prod. Jour., vol. 8, no. 4, pages 18-19, 21.

 December.
- Cohen, J. S.

 1928. What should jelly standards be? Fruit Prod. Jour., vol. 8, no.

 4, page 15. December.
- Fellers, C. R.

 1928. The extraction of apple juices in the manufacture of jelly.

 Mass. Agr. Exp. Sta. Tech. Bul. 15.
- Joyce, F. G.
 1928. Preservatives and jam. Food manufacture, 2: 236, 238-239.
- Campbell, C. H.
 1929. Low temperature jelly (The kind that mother used to make).
 Canning Age, 10: 59-62.
- Gaub, J.

 1929. Real apple butter plus attractive containers give real satisfaction. Canner, vol. 69, no 15, pages 25-27. September 28.
- Fellers, C. R., and M. J. Mack.

 1929. Simplified sugar and syrup calculations for preservers and canners. Fruit Prod. Jour., vol. 8, no. 7, pages 16-19, March; Canning Age, 10: 363-366.
- Anon.
 1929. Malic acid F. P. and its use in jelly. Fruit Prod. Jour., vol.
 8, no. 6, pages 20-21. February.
- Cruess, W. V.
 1929. Sugars used in the fruit products industries. Fruit Prod. Jour.,
 vol. 8, no. 5, pages 16-19. January.
- Campbell, C. H.
 1929. Campbell's Book: A textbook on canning, preserving and pickling.
 Canning Age, 521 Fifth Avenue, New York, N. Y. 2nd Ed.,
 revised, 1937.

Mrak, E. M. and W. V. Cruess.

1929. Utilization of surplus prunes. Calif. Agr. Exp. Sta. Bul. 483.

Darrow, G. M.

1929. Originating new fruit varieties for commercial preserving and canning (strawberries). Glass Packer, 2: 73-75.

Hirst, F.

1929. The preservation of fruit for the jam manufacturer. Food Manufacture, 4: 224-225.

Black, J. W.

1929. The feasibility of standardizing jam products. Food Manufacture, 4: 227-229, 232. (See also page 323.)

Cahalin, V.

1929. Another addition to the glass family (preserved figs). Glass Container, vol. 8, no. 12, pages 14-15, 38. October.

Anon.

1929. Different forms of pectin and how to handle them in manufacturing.
Glass Packer, 2: 113-114.

Anon.

1929. Safety in food preserving plants urged by National Safety Council. Fruit Prod. Jour., 9: 103-105.

Myers, P. B., and G. L. Baker.

1929. Fruit jellies. VI. The role of pectin. 2. The extraction of pectin from pectic materials. Delaware Agr. Exp. Sta. Bul. 160 (Tech. Bul. 10).

Rooker, W. A.

1929. Fruit pectin - its commercial manufacture and uses. ix +170 pages.

Avi Publishing Co., Inc., New York, N. Y.

Scott, J. M.

1929. Florida mangoes. Florida Dept. Agr. (Gainesville) Bul. 20 (n.s.).

Spencer, G.

1929. The formation of pectin jellies by sugar. Jour. Physical Chem., 33: 1987-2011; Spice Mill, 53: 1142-1143, July; 1302-1307, August, 1930.

Spencer, G.

1930. The relation between acids and pectin in jelly manufacture. Jour. Physical Chem., 34: 410-417.

Anon.

1930. The manufacture of jam, marmalade, jellies, and candied peel. Food Manufacture, 5: 139-143.

Diehl, H. C., J. R. Magness, C. H. Gross, and V. B. Bonney.

1930. The frozen pack method of preserving berries in the Pacific Northwest. U. S. Dept. Agr., Tech. Bul. 148.

Chace, E. M., C. G. Church, and H. D. Poore.

1930. The Wonderful variety of pomegranate; composition, commercial maturity, and by-products. U. S. Dept. Agr. Circ. 98.

Morris, T. N.

1930. The scientific principles of jam manufacture. Canner, vol. 71, no. 15, pages 23-24. September 27.

Cole, G. M., R. E. Cox, and G. H. Joseph.

1930. Does sugar inversion affect pectin jelly formation. Food
Industries, 2: 219-221.

Malcolm, O. P.

1930. Successful canning and preserving. 4th Ed., 663 pages. J. B. Lippincott Co., Philadelphia.

Chenoweth, W. W.
1930. Food Preservation. Chapters 11-15, pages 110-178. John Wiley & Sons, Inc., New York, N. Y.

Cole, G. M., R. E. Cox, and G. H. Joseph.

1930. Sugar inversion and other phenomena in jelly making. Food Manufacture, 5: 165-166, 195-196.

Krassner, F.
1930. How the Navy buys its jam. Glass Packer, 3: 387-388, 390, 403.

Hartmann, B. G., and F. Hillig.

1930. Determination of citric acid in fruits and fruit products (analyses of apple jelly and blackberry jam). Jour. Assoc. Official Agr.

Chem., 13: 99-103.

Lewis, S. J.
1930. Simple polarimetric test for sugars in jams. Analyst, 55: 384.

Anon.
1930. (British) standards for jams. Analyst, 55: 694-698.

Cahalin, V.
1930. "Glen Rosa" publicizes glass (orange marmalade). Glass Container,
10: 14, 47-48.

Blumenthal, S., and L. Thuor.

1930. Figs - candying and preserving. Fruit Prod. Jour., 10: 44-45,

October; Pears - candying and preserving, 10: 112-113, November.

Anon.

Anon.
1931. Production survey of the preserving industry for 1929 (U. S.,
Dept. Commerce). Fruit Prod. Jour., 10: 184-185.

Bedford, F. W.
1931. The flavor of the grape in jelly or jam. Canning Age, 12: 569-570,
572, 574.

Stennis, M. A.
1931. Florida fruits and vegetables in the commercial menu. Florida
State Dept. Agr. Bul. 50, 164 pages.

Macara, J.

1931. The composition of fruits as used for jam manufacture in Great
Britain. Analyst, 56: 35-43.

Black, J. W.
1931. Marmalade manufacture. Canner, vol. 72, no. 21, pages 32-34.
May 9.

Zook, P. A.

1931. The commercial manufacture of pure jellies, jams and marmalades.

Canner, vol. 73, no. 1, pages 23-30, June 20; no. 3, pages

23-24, July 4; no. 5, pages 23-26, July 18.

Scoular, F. I.

1931. A review of some of the recent literature on pectin and jelly making. Fruit Prod. Jour., 10: 369-371. (Bibliography)

Nelson, E. K., and H. H. Mottern.

1931. Pectin: its occurrence in fruits; its manufacture and recent restrictions governing its use. Fruit Prod. Jour., 10: 138-142.

(Bibliography and patent list.)

Robertson, W. F.
1931. Using the vacuum pan in preserve manufacture. Food Industries,
3: 339-341.

Meyers, P. B., and G. L. Baker. 1931. Factors affecting jellation of fruit juices and pectin solutions. Canner, vol. 72, no. 19, page 32. April 25.

Back, S.
1931. Pectin in jams and jellies (a review). Pharm. Jour. 127: 44-45.

Meyers, P. B., and G. L. Baker.

1931. Fruit jellies. VII. The role of pectin. 3. Effect of temperature upon the extraction of pectin. Delaware Agr. Exp. Sta.

Bul. 168 (Tech. Bul. 12).

Taylor, A. L., and F. Smith.

1931. Cerelose jells. Jour. Tennessee Acad. Sci., 6: 32-38.

Hollingshead, R. S., and C. E. Birgfeld. 1931. Survey of the preserving industry, 1930. Fruit Prod. Jour., 11: 49-50. Segal, B., and T. de Kiewiet.

1931. Occurrence of naringin in marmalade made from South African grape-fruit. Jour. So. African Chem. Inst., 14: 43-46. Reviewed, -Chem. Abst., 26: 3047, 1932.

Macara, T.

1931. The determination of soluble solids in jams, etc. Analyst, 56: 391-396.

Blumenthal, S.

1931. Imitation jellies. Fruit Prod. Jour., 10: 186.

Anon.

1931. Method of evaluation of viscous products (Lüers pectinometer).
Fruit Prod. Jour., 10: 312.

Blumenthal, S.

1931. New ideas for the preserving and soft drink industries. Fruit Prod. Jour., 10: 338.

Fellers, C. R., and J. A. Clague.

1932. Measurement of jelly strength in fruit and pectin jellies. Fruit Prod. Jour., 11: 180; A new jelly strength tester. Ind. Eng. Chem., Anal. Ed., 4: 106-107.

Elsburg, J.

1932. Practical jam making (English methods). Canner, vol. 75, no. 5, page 20. July 16.

Cruess, W. V., and G. L. Marsh.

1932. Pure fruit jelly juices. Fruit Prod. Jour., 11: 325-326.

Anon.

1932. New prune and apricot items introduced in glass. Western Canner and Packer, vol. 25, no. 7, page 23. November.

Morris, T. N.

1932. Jam and pulp manufacture: Scientific principles (English methods).
Canner, vol. 75, no. 9, pages 20, 22, 24. August 13.

Elsbury, J.

1932. Grapefruit preserves. Food Manufacture, 7: 77.

Shutt, F. T.

1932. Analyses of strawberries used in the preparation of strawberry jams. Analyst, 62: 35.

Wiegand, E. H.

1932. The maintenance of quality in barreling berries. Canning Age, 13: 205-206, 218; Canner, vol. 74, no. 13, pages 24, 26.

March 12.

Rooker, W. A.

1932. Sugar setting powers of commercial powdered pectins. Glass Packer, 11: 633-634.

Belagyi, L.

1932. Home apple products now glass pack profit makers. Canning Age, 13: 428-429, 446.

Thursby, I. S.

1

1932. The goodly guava. Florida Coop. Ext. Bul. 70. Florida State College for Women, Tallahassee.

Blumenthal, S.

1932. Processing of domestic Kadota figs. Fruit Prod. Jour., 12: 11, 22.

Campbell, C. H.

1932. Are you packing apple butter or apple sauce? Canning Age, 13: 570, 572, 578, November; 622, 629-631, December.

Morris, T. N.

1933. Principles of fruit preservation: jam making, canning, and drying. Series of Monographs on Applied Chemistry, vol. 6, 239 pages. Chapman & Hall, Ltd., London.

1933. Changes in the pactic substances of fruits during storage. Dept. Sci. Ind. Research, Rept. Food Inv. Board, pages 155-161.

Elsbury, J.

1933. Weisbaden fruit. Food Manufacture, 8: 24-25.

Thursby, I. S.

1933. Preserving Florida citrus fruits. Florida Coop. Ext. Bul. 75. Florida State College for Women, Tallahassee.

Campbell, M. C.

1933. Marmalade jelly. Food, 2: 115-122.

Anon.

1933. English jam. Food Manufacture, 8: 170-172; 204-207; 240-241.

Potter, R. S.

1933. Some experiments on the sterilization of jam. Food, 3: 25-26.

Anon.

1933. Glucose and jam. Food, 2: 138-140.

Van Arsdale, M. B., and W. H. Eddy.

1933. The value of types of dextrose in the preservation of fruits and vegetables. Bur. Publications, Teachers College, Columbia University, New York City.

Cox, R. E.

1933. Cranberry jelly - how it is made. Food Industries, 5: 348-349.

Anon.

1933. American jam manufacture. Food Manufacture, 8: 185-189.

Brown, H. D.

1933. Manufactured apple products (apple butter). Ohio State Hort. Soc. Proc. 1933: 54-60.

Morris, T. N.

1933. Principles of fruit preservation: Jam making, canning and drying. 240 pages. Chapman & Hall, London.

Reed, H. M.

1933. Improved methods of utilizing the Magnolia fig. Tex. Agr. Exp. Sca. Bul. 483.

Cruess, W. V., W. C. Cole, and M. A. Joslyn.

1933. Fruits in ice cream and ices. Calif. Agr. Exp. Sta. Circ. 331.

Lewis, S. J.

1933. Examining jams by the spectroscope. Food Manufacture, 8: 421-424.

Isham, P. D., and C. R. Fellers.

1933. Effect of manufacturing and preserving processes on the vitamins of cranberries. Mass. Agr. Exp. Sta. Bul. 296.

Caldwell, J. S.

1933. Quality progress marks present stage of canning, drying, and preserving. U. S. Dept. Agr., Yearbook of Agriculture, pages 344-348.

Anon.

1934. New jam and jelly formulas combine cane and corn sugars. Canner, vol. 78, no. 6, page 22. January 20.

Scott, W. C., and J. L. Heid.

1934. Marmalade stock and marmalade. Texas Citriculture, vol. 10, no. 9, page 18. March.

Baker, G. L.

1934. A new method for determining the jellying power of fruit juice extractions. Food Industries, 6: 305, 315; Fruit Prod. Jour., 14: 305, 1935.

Cox, C. N.

1934. Where and how guava jelly is made. Canner, vol. 79, no. 14, pages 19-20. September 15.

Baker, G. L.

1934. Improved methods of jelly manufacture. Food Manufacture, vol. 9, pages 427-429, 439; Canner, vol. 80, no. 6, pages 19-21, 24. January 19, 1935.

van Haastert, M.

1934. The importance of the preserving industry for agriculture. Nonthly Bul. Agr. Sci. and Practice, 25: 431-432T.

Myers, B. B., and G. L. Baker.

1934. Fruit jellies. VIII. The role of pectin. 4. The physico-chemical properties of pectin. Delaware Agr. Exp. Sta. Bul. 187 (Tech. Bul. 15).

Bailey, E. M.

1934. Apple butter (analyses of commercial brands). Connecticut Agr. Exp. Sta. Bul. 363: 659-660.

Anon.

1934. Glass containers help orange jam win popularity. Canner, vol. 79, no. 23, page 22. November 17.

Anon.

1934. Corn sugar - should it be used by food packing industries? Glass Packer, 13: 189-191.

Moon, H. H., and C. W. Culpepper.

1934. Factors affecting the quality of preserves made from Kieffer pears.
Fruit Prod. Jour., 14: 12-16, 20, 25.

Baker, G. L.

1934. A new method for jelly testing (the "jelmeter"). Fruit Prod. Jour.,
14: 305.

Anon.

1934. The manufacture of fruit jellies in the U.S.A. Food Manufacture, 9: 273.

Krno, J.

1934. Dextrose as an industrial commodity. Food Industries, 6: 107-109.

Hughes, E. B.

1934. The analysis of fruit and fruit products. Analyst, 59: 231-247. April.

Morris, T. N.

1934. Changes in the pectic substances of fruits during storage. Dept. Sci. Ind. Research (Gt. Brit.), Rept. Food Inv. Bd., 1933: 155-161.

"Artifex".

1935. Further investigations in jam manufacture. Food, 4: 412-414.

Anon.

1935. California guava jelly pack is developed. Western Canner and Packer, vol. 27, no. 4, page 28. August.

Turner, E. L.

1935. Making jellies when fruits lack sufficient acids. Canner, vol. 81, no. 19, pages 19-20, 40, October 9; Spice Mill, 58: 633-634.

Potter. R. S.

1935. Jam troubles. Food Manufacture, 10: 232-233.

Baker, G. L.

1935. How much sugar in fruit jellies. Food Industries, 7: 170.

Blumenthal, S.

1935. The manufacture of imitation jelly. Fruit Prod. Jour., 14: 178-180.

Turner, E. L.

1935. Step by step in the manufacture of fruit pectin. Canner, vol. 81, no. 1, pages 20, 22-23. June 15.

Turner, E. L.

1935. Jam, jelly and preserve making with the aid of apples. Canner, vol. 81, no. 19, pages 19-20, 40. October 19.

Baker, G. L.

1935. Imitation jelly from dried apple pomace. Fruit Prod. Jour., 15: 44-45, 55. October.

Anon.

1935. Methods of processing figs (Gulf coast-mostly Celeste). Canning Age, 16: 519-520, 524.

Hartmann, B. G.

1935. Report on (the determination of) fruit acids (in jam). Jour. Assoc. Official Agr. Chem., 18: 198-200.

Morris, T. N.

1935. Changes in the pectin of fruits during storage. Dept. Sci. Ind. Research (Gt. Brit.). Rept. Food Inv. Bd., 1934: 200-203. Reviewed, - Chem. Abst. 30: 178, 1936.

Zilva, S. S., T. N. Morris and E. O. V. Perry.

1935. Preservation of vitamin C in canning fruits and vegetables. Dept. Sci. Ind. Research (Gt. Brit.). Rept. Food Inv. Bd., 1934: 203-205. Reviewed, Chem. Abst. 30: 179, 1936.

Moon, H. H., C. W. Culpepper and J. S. Caldwell.

1935. Varietal suitability of peaches for preserve making and factors affecting the quality of the product. U. S. Dept. Agr. Circ. 375.

Poore, H. D.

1935. Passion fruit products. Fruit Prod. Jour. 14: 264-268, 285.

Morris, T. N.

1935. Softening orange peel (for use in marmalade). Food Manufacture, 10: 167.

Code Authority, N.R.A.

1935. What does it cost to make preserves? Glass Packer, 14: 105.

Reed, H. M.

1935. Fig product investigations. Texas Agr. Exp. Sta. Ann. Rept., 1934: 159-160, 1935: 165-166, 1936.

Morris, T. N.

1935-36 The freezing of soft fruits and its relation to subsequent processing. Proc. Brit. Assoc. Refrig., 32: 69-73.

Newman, J. L.

1936. The preserving industry - where is it headed? Canner, vol. 82, no. 10, pages 11-12, 32. February 15.

Robertson, W. F.

1936. Preserving (R.S.P.) cherries by the vacuum method. Food Industries, 8: 173-174.

Morris, T. N.

1936. Preserving fruit for out-of-season jam. Food Manufacture, 11: 159-160; Pectin and pectin-sugar jellies, 160-162.

Clague, J. A., and C. R. Fellers.

1936. Apple cider and cider products (cider jelly, page 29). Mass. Agr. Exp. Sta. Bul. 336.

. Baker, G. L., and R. F. Kneeland.

1936. Cranberry pectin properties. Fruit Prod. Jour., 15: 271-273, 279.

Anon.

1936. A complete course in canning. 6th Ed., revised. Preserves, pages 310-325. The Canning Trade, Baltimore.

Baker, G. L.

1936. Fruit jellies. IX. The role of pectin. 5. The enzymic hydrolysis of starch in the presence of pectin in pectic extracts and in apple pomace. Delaware Agr. Exp. Sta. Bul. 204 (Tech. Bul. 18).

Morris, T. N.

1936. The effect of various methods of storage on the setting power of the pectin in fruits. Dept. Sci. Ind. Research (Gt. Brit.)
Rept. Food Inv. Bd. 1935: 182-186; The effect of modifying the acidity of extract of red currants on the speed of setting and the strength of the jelly, 186-187.

"Artifex"

1936. An analytical study of jam manufacture. Food, 6: 4-6. October.

Clark, S. H.

1936. Guava products go to town. Canner, vol. 83, no. 19, pages 22-23. October 17.

Campbell, C. H.

1936. How to make good apple butter. Canning Age, 17: 410-412, October; 452-454, November; 486-488, 504, 507, December.

McIntire, W. A.

1937. Jelly clarification. Method of treating fruit juices by enzyme to produce clear, sparkling jellies. Canning Age, 18: 286-290.

Anon.

1937. Enzyme catalysts. Their use in the clarification of pectin solutions and fruit juices. Canning Age, 18: 322-323.

Walde, W. L.

1937. Checking soluble solids. Preserve, jelly and apple butter packers find use of refractometer invaluable. Canning Age, 18: 359-360.

Baker, G. L.

1937. Extraction and standardization in fruit jelly manufacture.

Canner, vol. 85, no. 11, pages 22-23, 31, August 21; Food

Manufacture, 12: 147-150.

Fellers, C. R., and T. Onsdorff.

1937. Dextrose in the manufacture of fruit and vegetable products. Ind. Eng. Chem., 29: 946-949.

Prescott, S. C., and B. E. Proctor.

1937. Food technology, Chap. 20. Jellies and jams, pages 563-570. McGraw-Hill Book Co., Inc., New York, N. Y.

Campbell, C. H.

1937. Campbell's book, section 2. Preserving, pages 225-367. Revised Ed. Vance Publishing Corp., New York, N. Y.

Macara, T.

1937. Science and the conservation of food: some special problems (includes jams). Proc. Roy. Inst. Gt. Brit. Advance copy, 34 pages. Reviewed, - Chem. Abst., 31: 5883, 1937.

Morris, T. N.

1937. Effect of various methods of storage on pectin in orange peel.

Rept. Food Inv. Bd. (Gt. Brit), 1936: 204-207. Reviewed, - Chem.

Abst., 32: 5522, 1938.

Clark, S. H.

1938. "The more unusual the product the greater the profit." Canner, vol. 86, no. 11, pages 32-33. February 19.

Note

1938. Eat the jam - then eat the jar. Canner, vol. 86, no. 19, page 30. April 16.

Senn, G.

1938. Preserves - do you know your costs? Canning Age, 19: 235-237.

Reed, H. M.

1938. The canning and preserving of figs in Texas. Canner, vol. 86, no. 19, page 20. April 16.

Heid, J. L.

1938. The use of citrus pomace in making imitation jams. Canner, vol. 87, no. 6, page 26. July 16.

Isham, P. D., and H. H. Mottern.

Products from sweet cherries. Proc. 33d Ann. Meet. Wash. State Hort. Assoc., 1937: 59-61; Fruit Prod. Jour., 17: 264-265; Western Canner and Packer, vol. 30, no. 5, pages 30, 33. May.

Baker, G. L.

1938. Improved Delaware jelly strength tester. Fruit Prod. Jour., 17: 329-330.

Sale, J. W.

1938. Interpretation of chemical analyses of preserves and jams. Jour. Assoc. Official Agr. Chem., 21: 502-515; Glass Packer, 17: 434-436, 447; Western Canner and Packer, vol. 30, no. 8, pages 41, 43, 45; Fruit Prod. Jour., 17: 331-336, 347.

Blumenthal, S.

1938. Cleanliness in preserving plants. Fruit Prod. Jour., 17: 370-371, 379.

Cruess, W. V.

1938. Commercial fig products. Fruit Prod. Jour., 17: 337-339, 343, July; 368-369, 395, August; 18: 39, October.

Cruess, W. V., and R. Celmo.

1938. Utilization of surplus apples. Fruit Prod. Jour., 17: 325-328, 345, July; 356-359, August; 18: 4-5, September; 43-44, 52, October; 79-81, November.

Cruess, W. V.

1938. The utilization of surplus plums. Fruit Prod. Jour., 18: 72-74, November; 101-105, December.

Poultney, S. V.

1938. Jam manufacture today (English practice). Food Manufacture, 13:

Cruess, W. V., and R. Celmer.

1938. Processes for apple juice, sauce, and butter. Western Canner and Packer, vol. 30, no. 12, pages 16-17. November.

Note.

1938. Introduces new strained jams for baby feeding. Fruit Prod. Jour., 18: 120. December.

Fiene, F., and S. Blumenthal.

1938. Handbook of food manufacture. Chap. 8 and 9. Jellies, preserves, jams and marmalades, pages 265-293. Chemical Publishing Co. of New York, Inc., New York, N. Y.

Cruess, W. V.

1938. Commercial fruit and vegetable products. 2nd Ed., Chap. 17-18, pages 340-387. McGraw Hill Book Co., Inc., New York City.

Smock R. M., and F. W. Allen.

1938. Soluble pectin changes in gas-stored fruit. Proc. Amer. Soc. Hort. Sci., 35: 184-187.

Note.

1939. Bitter orange marmalade base. Western Canner and Packer, vol. 31, no. 1, page 29. January.

Anon.

1939. Gruber-Thomas Preserving Co. of St. Louis (continuous mass-production operation). Glass Packer, 17: 33-36. January.

Anon.

1939. New legal standards bring N.P.A. (National Preservers Association) its biggest job. Glass Packer, 18: 94, 109-110. February.

Clark, S. H.

1939. Guavas and the Loesch family. Canner, vol. 88, no. 24, pages 22-23. May 20.

Baker, G. L., and M. W. Goodwin.

1939. Fruit jellies. X. The role of pectin. 6. Viscosity of dilute pectin solutions as affected by metallic salts and pH.

Delaware Agr. Exp. Sta. Bul. 216 (Tech. Bul. 23).

Fellers, C. R.

1939. Dextrose in the food industries and its health status. Amer: Jour. Publ. Health, 29: 135-138.

Anon.

1939. Preserves (statistics, 1923-1938). Western Canner and Packer, Yearbook and Statistical Number, vol. 31, no. 5, page 179.

April 30.

Reich, G. T.

1939. Converting batch operation to continuous process makes better quality control. Food Industries, 11: 190-192, 230.

Walsh, T. C.

1939. Marmalade making by modern (British) methods. Food Manufacture, 14: 156-160. May.

Eaton, E. F.

1939. Jam. Food Manufacture, 14: 167-169. May.

Brown, H. L. (Acting Secy. Agr.)

1939. Rules and regulations (as amended) governing the grading and certification of canned fruits and vegetables. Federal Register, 4: 3744-3749. August 29.

- Clark, S. H.
 - 1939. Commercial jelly production starts (new season) in South Florida. Canner, vol. 89, no. 12, pages 16-17. August 26.
- Olsen, A. G., R. F. Stuewer, E. R. Fehlberg, and N. M. Beach.
 1939. Pectin studies. Relation of combining weight to other properties
 of commercial pectins. Ind. Eng. Chem., 31: 1015-1020.

UNITED STATES PATENTS

- 1,262,399, April 9, 1918, C. H. Simpson, to Old Virginia Orchard Co., Inc.;
 Apple jam.
- 1,304,166, May 29. 1919, R. Douglas, to Douglas Packing Co., Inc.; Food product and its method of manufacture (fruit jellies, jams and marmalades, with added pectin).
- 1,362,869, December 21, 1920, M. O. Johnson; Jelly making.
- 1,365,000-001, January 11, 1921, R. de O. McDill: Food product (a citrus base for making marmalades, jams, jellies, etc.).
- 1,398,339, November 29, 1921, E. Monte; Making jams, jellies, and marmalades.
- 1,408,915, March 7, 1922, R. E. Wheeler; Apparatus for preserving fruit.
- 1,410,920, March 28, 1922, F. W. Huber; Pectic substances for making jellies and the like.
- 1,429,834, September 19, 1922, O. Bielmann; Process of making juices, jellies, and jams, from vegetable substances such as fruits and vegetables.
- 1,451,135, April 10, 1923, A. W. Wright and E. H. Wright; Food product and process of production. (Jellies, jams, marmalades and preserves from various commonly grown melons).
- 1,467,746, September 11, 1923, W. G. Allen; Preserving fruit and the like.
- 1,507,328, September 2, 1924, S. H. Babigian and B. Babigian; Food product and method of production (for preserves or candied products).
- 1,513,615, October 28, 1924, H. T. Leo; Dry powder jelly base containing pectin.
- 1,522,701, January 13, 1925, J. C. Ripperton; Making jellies and apparatus therefor.
- 1,534,050, April 21, 1925, P. Barrielle; Manufacture of preserved fruits.

- 1,553,496, September 15, 1925, R. F. Bacon; Preparation of (intermediate) fruit products (for use in the manufacture of jellies, jams, etc.).
- 1,558,995, October 27, 1925, M. N. Mitchell; Combination jelly strainer and fruit press.
- 1,560,396, November 3, 1925, P. Navarre; Automatic and rapid production of crystallized or preserved fruits.
- 1,564,599, December 8, 1925, J. C. Magaw and A. S. Magaw; Preserving fruits.
- 1,629,716, May 24, 1927, A. Leo; Jelly preparation (for use in making jams and jellies).
- 1,634,295, July 5, 1927, W. B. McLaughlin; Fruit preserves (berries, etc.)
- 1,647,089, October 25, 1927, A. Faitelowitz; Production of preserves of vegetable matters of unlimited durability.
- 1,703,730, February 26, 1929, C. Fraisse; Process for the manufacture of preserved fruit.
- 1,704,367, March 5, 1929, T. C. Noore, to Mor-Pak Preserving Corporation; Process of preserving fruit (figs).
- 1,717,258, June 11, 1929, A. A. F. Rambaud; Manufacture of preserved fruits (continuous process).
- 1,692,040, November 19, 1929, H. L. Hulbert, to Murray Calif. Fruit Products, Inc.; Dried marmalade.
- 1,735,406, November 12, 1929, T. C. Moore, to Mor-Pak Preserving Corporation; Fruit-perforating machine (for figs, etc.).
- 1,818,263, August 11, 1931, A. Leo; Jelly preparation and process of making the same.
- 1,838,210, December 29, 1931, W. D. Bost, to Orange Crush Co.; Shredding device (for peeling navel oranges).
- 1,846,052, February 23, 1932, M. Grant; Container and method for sealing jelly or preserves.
- 1,858,374, May 17, 1932, W. A. Rooker and V. E. Speas, to Speas Manufacturing Co.; Process for making jams, jellies, and kindred products.
- 1,879,697, September 27, 1932, H. G. Loesch, to General Foods Corporation; Pectin preparation.
- 1,890,475, December 13, 1932, U. G. Todd, to Pfaudler Co.; Treating fruits, vegetables, etc., for use as foods (sirup impregnation under partial vacuum).

- 1,911,020, May 23, 1933, M. Grant; Method for sealing jelly, preserves, or the like in containers, and product for such use.
- 1,913,576, June 13, 1933, M. J. Walsh; Manufacture of jellies (prevention of "bleeding").
- 1,917,454, July 11, 1933, L. C. Mazzola; Moisture take-up for jellies and conserves.
- 1,968,704, July 31, 1934, R. M. Preston; Jelly manufacture.
- 1,975,560, October 2, 1934, R. Sollich; Apparatus for boiling viscous materials such as caramel, marmalade, and the like.
- 1,999,443, April 30, 1935, R. E. Cox, to California Fruit Growers Exchange; Jams and jellies.
- 2,005,095, June 18, 1935, G. MacLean; Process of making jelly (without the addition of extraneous pectin).
- 2,050,182, August 4, 1936, H. Kay; Tomato marmalade and process of making same.
- 2,076,036, April 6, 1937, A. S. Leo, to California Fruit Growers Exchange; Composition for making food jellies.
- 2,115,191, April 26, 1938, P. S. Brubaker; Dry apple butter.
- 2,137,205, November 15, 1938, W. W. Cowgill, to Sardik, Inc.; Treatment of food materials (barreled frozen strawberries).
- 2,132,485, October 11, 1930, S. Levison, to Orchard Products Company; Method of making food products (fruit jellies, jams, preserves, marmalades and the like).
- 2,150,192, March 14, 1939, W. Sander; Shredder (for orange peel).
- 2,161,238, June 6, 1939, J. H. Stanton; Preserve base.
- 2,171,823, September 5, 1939, G. L. Baker; Apparatus to test juices (for jelling qualities).
- 2,165,902, August 11, 1939, P. B. Myers, to Sardik, Inc.; Methodrof treating pectin-containing raw material.
- Note: These references should be available for consultation in any comprehensive public or technical library or through the library of your State Agricultural Experiment Station. Patent descriptions may be purchased from the Commissioner of Patents, U. S. Patent Office, Washington, D. C., for 10 cents each.